coridon was common, a largish race, and here again I took more females than males. Only three specimens of *P. thetis* were captured and all were of an abnormal blue colour with mal-developed scales. I took a single *P. escheri* (worn) also of an abnormal colour, and likewise a single pretty, minute female of *P. hylas*. *Scolitantides* put in an appearance with a pair of *S. baton*, and I also saw one *S. orion* but failed to catch it, I feel sure it was *orion*, but of course I admit the doubt attaching to an uncaptured Lycænid. Again a single female *Lycaenopsis argiolus* made its home in one of my boxes and this closes the list of "Blues."

The *Hesperiidae* were far from common. I took a nice little series of *Urbicola comma*, two *Hesperia fritillum* (*cirsii*) and one *H. sao*.

This list is a very meagre record for Mont Ventoux, but my distance was too great from the scene of action, and I should judge that the only really satisfactory method of adequately working the locality (unless you had a motor-car) would be to camp out on the mountain near one of the very few water holes. It would then be possible to do justice to the district, which I should much like to visit again, were it feasible to adopt this method.

On August 17th we had to turn our faces towards the home country and thus ended a very delightful holiday, during which we experienced many and continued kindnesses from across the Channel, the "Entente Cordiale" being so far as we experienced of certainly the most cordial nature.

I must not close however without expressing my best thanks to my colleague Mr. Wheeler for kindly going through my *Melitaea* and naming them up for me, and also to Mr. Rowland-Brown for the same kindly help with the genus *Hesperia*.

During the whole two months absence we had glorious and uninterrupted sunshine. I believe that two short showers summed up the only rain we had.

Seasonal Polymorphism and Races of some European Grypocera and Rhopalocera.

By ROGER VERITY, M.D.

(*Continued from vol. xxxiii., page ~~193~~.*) 214

Melitaea didyma, Esp., race *romana*, Calberla, and second generation ROMULA, mihi.—In my summary of the races and seasonal dimorphism of this species, in the *Ent. Rec.*, xxxi., p. 179, I used the name of *romana* for the second generation of my race *protea* from Tuscany. Staudinger gave *romana* as a synonym of *persea*, Koll. Seitz remarked that this was quite a mistake and he used the name for the individuals of the second brood of southern Europe, which resemble *persea*, together with that of *dalmatina*, Stdgr. In my Italian paper on the Mainarde Mts. (see p. 171) I have already stated at page 59 that, having procured Calberla's original description, I discovered both Staudinger and Seitz have made a blunder. He clearly says his typical series was collected at Monte Rotondo, m. 165, in May and June and he describes in a most perfect manner the first generation of the Roman race, which is different from the Tuscan *protea* in being of a lighter fulvous and less extensively marked with black. I remarked that *dalmatina* is no doubt the second generation of race *meridionalis*, Stdgr.,

and I called *caldaria* the very small and pale fulvous second generation, from Florence, of *protea*. I have just received a series collected last August at Genzano, near Rome ; this is evidently the second brood. I find it is surprisingly different from the Florentine *caldaria* in that it is in no way as different from the first broods of *romana* or *protea*. It is only a little smaller than *romana* ; it has none of the ochreous tinge, characteristic of summer individuals, being only of a yellowish fulvous in male and of a whitish or rosy fulvous in female ; the black markings are only a little reduced in extent as compared with *romana* ; the basal black suffusion, however, is always very limited or even abolished, and this is the only well marked feature, showing I have before me a second brood. On the underside the black markings and the fulvous bands are remarkably prominent and deep in tone, instead of being, on the contrary, faint, as in *caldaria*. Two very old females are unmistakeably survivals of the first brood and suggest *protea*, rather than *romana*, having flown at Genzano. A little August series from Paliano, a more arid locality of the same region, comes very near *caldaria* : presumably such surroundings would produce *romana* in the first generation, because the latter is a first step towards *caldaria*, as compared to *protea*.

Melitaea trivia, Schiff. and Denis, race *catapelioides*, Stauder [*Zeit. wissen. Insektenbiol*, xiv., p. 57 (1918)], and race CAUCASI, mihi.— This is one of the species which in Italy has only been found in a few localities, at great distances from each other. It is recorded from Botzen in South Tyrol by Spüler. Count Hartig, of Botzen, and Astfäller, of Meran, told me they had never found it, but the former had heard from Wagner and Stauder that they had collected it at the altitude of m. 1000 on Mt. Laugen, situated at the beginning of the Ultental, near Lana. It is found in the Roman Campania : recorded in old days by Calberla and Standfuss at Monterotondo, and lately by Rostagno, who found it at Oricola, m. 1000, on the boundary of the Abruzzi. I have just seen two specimens collected in August, by a beginner in entomology, at Paliano, on the railway between Rome and Fiuggi. The third locality is Calabria : discovered by Stauder in June above Paola, m. 400 to 600, and called *catapelioides* ; found again last year by Querci, on May 23rd, near S. Fili, m. 900. The peculiarities of *catapelioides* in Stauder's description seem to be the light ochreous colour as in the Asiatic *catapelia*, Stdgr., and a series of black dots standing out prominently between the marginal band and the premarginal lunules, which constitute, according to Stauder, an entirely new feature in this species. Size like that of *fascelis* ; black pattern very extensive ; dark basal suffusion even more so than in any *fascelis*. The three specimens found by Querci do not fit this description exactly, showing there must be a good deal of individual variation. One is nearly identical to Seitz's figure of *fascelis*, but the fulvous is a little more ochreous in tone ; the black dots described by Stauder are certainly there, but they are blent with the very broad marginal band. The other specimens are more ochreous in tone, but, being worn, are no guarantee as to what the colour was when fresh ; pattern much less extensive than in preceding, and, more or less, as in what one calls the nymotypical *trivia* ; no trace of the black dots. The two Paliano specimens of second generation are similar to the

two latter, but smaller and with pattern much less extensive, *i.e.*, similar to those *nana*, Stdgr., from South Russia, which point more to *catapelia*, Stdgr. Two more specimens from Genzano, near Rome, collected in August, 1921, are intermediate, being a little larger, redder, and with pattern more intensive than in the latter; they quite resemble Seitz's figure of male *nana*. August and September are the months one would have expected the second generation to emerge in and the Campania data answer this prevision. Two generations from April to July, as Spüler seems to suggest, is an absurdity. A bipartite emergence of the first brood is instead very likely, similar to the one Querci has observed near Florence yearly in *didyma*, Esp., since 1915; I described this phenomenon in the *Ent. Rec.*, xxxi., p. 105. For the small and ochreous second generation of Central Europe I think one should revive the name of *iphigenia*, Esper, from "Austria," which has been neglected. I possess a very pretty race of *triria* collected by the Sommier-Levier expedition in the Central Caucasus at the Latpari Pass, m. 2000 to 3000, on August 4th, 1890, together with the first *Parnassius nordmanni*, Mén., of the nymotypical race found in Europe and now in my collection. This race, to my knowledge, has not yet been recorded. It corresponds to race *alpina*, Stdgr., of *M. didyma*. In both sexes the black markings are not particularly extensive, but the female has the ground colour of a yellowish white in the outer portion of the wings, and of a greenish grey in the basal part; only the anterior half of hindwing, as far back as the third median nervure, is of the usual bright fulvous; it thus has a very variegated appearance, distinctly alpine.

Brenthis daphne, Schiff. and Denis, race TENUITERMACULOSA, mihi, and race *nikator*, Frhst. [*Internat. Ent. Zeit. Guben*, iii., p. 113 (Aug. 14th, 1909)].—Frühstorfer very rightly pointed out the considerable differences of aspect exhibited by the nymotypical race and the one from South Tyrol (Klausen) and from the Valais (Martigny). The characters he gives are "the lighter yellowish-brown ground colour, the much smaller submarginal spots of hindwing and the notably finer black markings generally, the underside colour, which is altogether lighter, with eye-spots more prominent and the yellow median band lighter in tone and more sharply outlined." He notes that his Valais females are still more conspicuous than his finest from Klausen. Turati and I in our "*Faunula Valderiensis*" [*Bull. Soc. Ent. Ital.*, xlii., p. 212 (1911)] referred the race of the Baths of Valdieri in the Maritime Alps to Frühstorfer's. Subsequently I found that all the specimens collected by Querci in Central Italy, from Tuscany to the Mainarde Mts. in Southern Latium, were quite similar to my series from that locality and I used the same name for them. Last year, however, I purchased an extensive series collected by the late Arno Wagner at Klausen, and Querci procured me some specimens from S. Fili on the Coast Range of Calabria. I then discovered that the races of these two localities, although so different and far apart, were very similar to each other, but that the race which extends from the Maritime Alps to the whole of Central Italy, was as different again from those *nikator* as the latter are from nymotypical *daphne*, and constituted a much further grade of variation in the same direction. Suffice it to say that only one male from Klausen, out of 25, resembles

the Valdieri race. The females differ still more from each other and resemblance never occurs: at Klausen their black markings are more extensive than in the male; in the other race they are, if anything, less extensive. This, of course, is due to the usual rule in all the *Argynnidi* races of the Alps, as compared with those of Central Italy. In this case, as in the others, a striking feature is the total or nearly total absence in the latter region of the dark basal suffusion on all the wings in both sexes. Other features of my new race, besides the notable further accentuation of the characters given by Frühstorfer, are its larger size than *nikator* and the particularly pale, dull ochreous yellow of the female, which increases the sexual dimorphism. What is surprising is that *daphne* at the Baths of Valdieri should be the same as in Central Italy, whereas *niobe*, L., and *aglaja*, L., produce in that locality their Alpine characteristics to a high degree and differ most markedly from the races of Central Italy by the extent of their dark markings. Frühstorfer was right in saying the Valais race is still more striking than the one of Klausen. Judging from specimens collected by Wullschlegel at Martigny, it is intermediate between the two races described, but it comes nearer to my new, culminating one than to the Klausen *nikator*. I propose restricting this name to the latter and calling the other *tenuitermaculosa*, taking as "typical" my series from the neighbourhood of Florence. The Martigny race could be designated as *tenuitermaculosa* trans. ad *nikator*. It will be noticed that in this species again the Calabrian race goes back to the darkest Alpine race and contrasts with its near neighbour of Central Italy.

Argynnis niobe, L., race *rubida*, Vrty., trans. ad *appenninica*, Vrty. —In the *Bull. Soc. Ent. Ital.*, xlv., p. 214, pl. I., fig. 8 (1914), I described the beautiful race discovered by Querci at the Piani di Carmelia, m. 1200, on the Aspromonte, which is a near ally of *kuhlmanni*, Seitz, from the Black Sea, and I described (*l.c.*, p. 213, pl. I., fig. 6 and 7) the race from Central Italy, which contrasts sharply with it. The race of the Coast Range (Le Crociate, m. 900 to 1000, above S. Fili) has, as usual, the Calabrian characteristics to a lesser extent than the Aspromonte one, but in the case of this species, instead of approaching the race of the Alps, it is transitional to the one of Central Italy, probably because *rubida* itself is oriental in character and not similar to the Alpine race, as is the rule in the other species. At Le Crociate the fulvous is slightly more reddish than in *appenninica*, but far from the beautiful carmine tinge of *rubida*; the black markings are intermediate in extent; the underside of hindwings has traces of the rust-coloured spots, but paler and less extensive than in *rubida* and often mixed with the green, which replaces it in *appenninica*; finally, one male specimen has been found with all the silver spots present, whereas no *rubida* of this sort has been detected amongst the large numbers collected on the Aspromonte.

Argynnis aglaia, L., race LOCUPLETATA, mihi, =*locuples*, Vrty. [*Ent. Rec.*, xxxi., p. 195].—I propose this new name to replace that of *locuples*, which I was sorry to discover had already been applied by Butler to an *Argynnis* of the species usually called *adippe*, L.

(To be continued.)